

International Bamboo Building Design Competition

Registration Number 1367

Category – Single Family Custom House (high end specialty)

Location – Mid West Heartland

Contact Info – Gabriel Gallaher & Andrew Van Leeuwen
5101 Urbandale Ave.
Des Moines, IA 50310 USA
515.953.8063
gabrielg@iastate.edu

This residence, located in the Mid-West Heartland, provides a lush view of the changing seasons and rolling hills of its site. The house is situated on a south-facing site in a small clearing amid a wooded landscape, completing the scenic picture.

The design for this 3000 square foot high-end specialty house utilizes the linear nature of bamboo to create an interplay between lines and planes. The roundness of bamboo separates it from classic post and beam construction and renders itself in a variety of curvaceous forms as the dwelling emerges from the landscape. Massive, planar forms dominate the northern realms of the house to provide thermal mass, as well as an anchor point for this flowing organic structure. The building utilizes this transition between linear, airy structure and massive, planar forms to demonstrate the many purposes that bamboo can fulfill.

Bamboo is employed in an array of applications ranging from curvilinear ceiling surfaces to undulating screens. A layered grid of bamboo poles, rigidly joined, forms the overlying structure of the house. This undulating composition flows around a massive hearth and delineates private and public spaces to create a layered dwelling. Bamboo also lends itself to the hearth by providing a unique formwork, embedding its relief upon the surface of the concrete. These pieces are then exploited as tension members in a composite flooring system.

This passive solar dwelling nestles into its landscape by forming a complex layering of spaces. The great room is flooded with southern light from its soaring, two-story glass walls. Private spaces divulge from this point, wrapping down around the massive hearth into the earth or ascending through the airy structure to smaller areas of solitude and tranquility.